

Notice of Allowability

Application No.

09/840,716

Examiner

Lan Vinh

Applicant(s)

SNIEGOWSKI ET AL.

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment and remarks filed on 10/10/2003.
2. ☒ The allowed claim(s) is/are 1-76.
3. ☒ The drawings filed on 23 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 031104
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Lan Vinh
AU 1765

Allowable Subject Matter

1. Claims 1-76 allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 39, 58, the cited prior art of record fails to disclose or suggest a method for making a surface micromachined microstructure comprises the step of forming a first structural layer over a first sacrificial layer and after a step of forming the first sacrificial layer, wherein the first structural layer extends in a lateral dimension and comprises a first perimeter that defines a lateral extent of the first structural layer, wherein a plurality of conduits extend in said lateral dimension underneath said first structural layer such that said first structural layer overlies said plurality of conduits, wherein at least one end of at least one of said plurality of conduits is at a location in said lateral dimension that at least generally corresponds with a location in said lateral dimension of a corresponding portion of said first parameter. In the contrary, the closest cited prior art of Barron et al (US 5,919,548) discloses a method for micromachining a MEMS device comprises the step of forming a first structural layer 44 over a first sacrificial layer 40 and after a step of forming the first sacrificial layer, wherein the first structural layer extends in a lateral dimension and comprises a first perimeter that defines a lateral extent of the first structural layer, wherein a plurality of etch release channel 52/conduit that does not extend in said lateral dimension on said first structural layer and said plurality of etch release channel/conduits 52 overlies the first structural layer 44 (fig. 3r). Regarding claim 63, the cited prior art of record fails to disclose or suggest a method for making a surface micromachined microstructure comprises the

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step of removing a first sacrificial layer, wherein said removing step comprises using a first etchant to define at least one etch release conduit that is hollow, embedded, has a closed perimeter that is defined at least in part by said first sacrificial layer, and extend in a lateral dimension, and thereafter using a second etchant that is different from said first etchant to remove said first sacrificial layer by allowing said second etchant to flow within said at least one etch release conduit, wherein said at least one etch release conduit extends in said lateral dimension underneath a first structural layer such that said first structural layer overlies said at least one etch release conduit of said first parameter. In the contrary, the closest cited prior art of Barron et al (US 5,919,548) discloses a method for micromachining microstructure comprises the step of removing a first sacrificial layer 40 by flowing an etchant through one etch release channel 52/ conduit, wherein said at least one etch release conduit does not extends in a lateral dimension on said first structural layer and the etch release channel/conduit 52 overlies the first structural layer 44 (fig. 3r). The reasons for allowance of claims 67, 68, 74 have been stated in the previous office action (paper no. 5), see first paragraph on page 21 of the remarks.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471. The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LV
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